

What is claimed is:

1. A liquid crystal display device comprising:

substrates disposed in opposition to each other with a liquid crystal being interposed therebetween;

a pixel electrode formed in each pixel area on a liquid-crystal-side surface of one of the substrates;

a counter electrode which generates an electric field between itself and the pixel electrode; and

alignment films disposed in contact with the liquid crystal on the liquid-crystal-side surfaces of the respective substrates,

the liquid crystal having a positive or negative dielectric anisotropy,

each of the alignment films being made of a material containing a diamine structure which traps ionic impurities.

2. A liquid crystal display device according to Claim 1, wherein each of the alignment films has uniaxial orientation properties.

3. A liquid crystal display device according to Claim 1 or 2, wherein the pixel electrode and the counter electrode are formed as different layers with an insulating film interposed therebetween, either one of the pixel electrode and the counter electrode being formed of a transparent conductive layer.

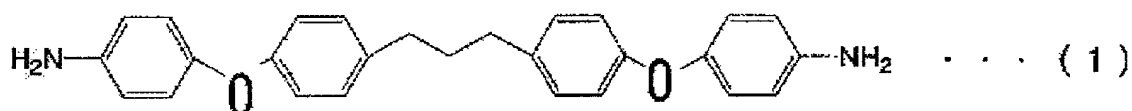
4. A liquid crystal display device according to Claim 3,

wherein the transparent conductive layer is made of Indium-Tin-Oxide (ITO).

5. A liquid crystal display device according to Claim 3, wherein the transparent conductive layer is made of Indium-Zinc-Oxide (IZO).

6. A liquid crystal display device according to Claim 1, wherein the diamine structure is expressed by the following chemical formula (1):

(Chemical Formula 1)



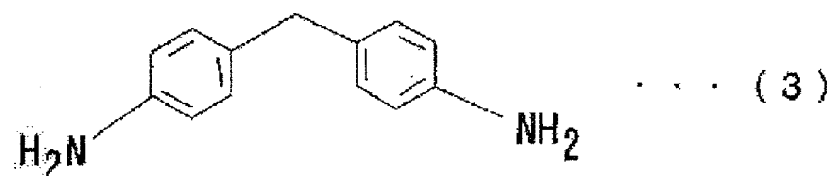
7. A liquid crystal display device according to Claim 1, wherein the diamine structure is expressed by the following chemical formula (2):

(Chemical Formula 2)



8. A liquid crystal display device according to Claim 1, wherein the diamine structure is expressed by the following chemical formula (3):

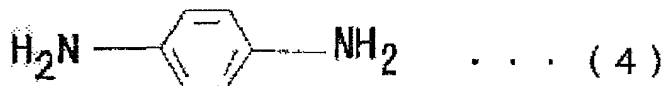
(Chemical Formula 3)



9. A liquid crystal display device according to Claim 1,

wherein the diamine structure is expressed by the following chemical formula (4) :

(Chemical Formula 4)



10. A liquid crystal display device according to Claim 3, wherein the one of the pixel electrode and the counter electrode that is formed of the transparent conductive layer is formed in a layer underlying the insulating film, while the other is formed in a layer overlying the insulating film and includes electrodes disposed to be superposed on the one electrode and to be extended in one direction and juxtaposed in a direction transverse to the one direction.

11. A liquid crystal display device according to Claim 10, wherein AC image retention is 8 % or less.

12. A liquid crystal display device according to any of Claims 1 to 11, wherein ionic image retention is not observed after pixels have been turned on for two minutes.

13. A liquid crystal display device according to Claim 1, wherein the liquid crystal has a resistivity of  $1.0 \times 10^{10} \Omega \cdot \text{cm}$  or more and  $5.0 \times 10^{13} \Omega \cdot \text{cm}$  or less.

14. A liquid crystal display device according to Claim 1 or 2, wherein each of the alignment films has a film thickness of 40 nm to 300 nm.

15. A liquid crystal display device according to any of

Claims 1, 3 and 10, wherein the insulating film has a film thickness of 100 nm to 4  $\mu$ m.

16. A liquid crystal display device according to Claim 1 or 13, wherein the liquid crystal contains liquid crystal molecules each of which has a difluorobenzene structure in itself.

17. A liquid crystal display device according to Claim 1 or 13, wherein the liquid crystal contains liquid crystal molecules each of which has a dicyanobenzene structure in itself.

18. A liquid crystal display device according to Claim 1 or 13, wherein the liquid crystal contains liquid crystal molecules each of which has a difluorobenzene structure in itself, as well as liquid crystal molecules each of which has a dicyanobenzene structure in itself.

19. A liquid crystal display device according to Claim 1 or 13, wherein the liquid crystal contains liquid crystal molecules each of which has a monocyanocyclohexane structure in itself.

20. A liquid crystal display device according to Claim 1 or 13, wherein the liquid crystal contains liquid crystal molecules each of which has a monocyanocyclohexane structure in itself, as well as liquid crystal molecules each of which has a difluorobenzene structure in itself.

21. A liquid crystal display device according to any of

Claims 1 to 20, wherein its ionic image retention strength  
is 3 or less.